Tuesday, June 9, 2013
Committee on Education and Workforce
Keeping College Within Reach: Improving Higher Education through Innovation
Testimony of Dr. Joann Boughman, University System of Maryland

I am Joann Boughman, Senior Vice Chancellor for Academic Affairs at the University System of Maryland (USM). I am pleased to join you to share some information about the manner in which the USM and its 12 institutions are meeting the challenges of keeping college within reach for all of our citizens. Our university system includes research I institutions, comprehensives, historically black universities, one totally on-line university, and a specialized research institute. As such, we are a microcosm of public higher education and in an enviable position to design and test many types of academic transformations and determine if focused policies can have an impact of controlling costs and improving college completion rates for multiple types of student populations.

With the leadership of an active Board of Regents and our vibrant Chancellor William "Brit" Kirwan, USM has become a leader in many areas of academic transformation and creating flexibilities that will enhance the ability of our very diverse student population of more than 155,000 attain degrees and enhance Maryland's and the country's ability to compete globally.

There is a confluence of developments surrounding the higher education enterprise that make this point in our history a time when the country must step forward and invest to maintain a leadership position in global competitiveness.

First, there has been a major focus on completion, with emphasis in the areas of science, technology, engineering and mathematics (STEM). President Obama, Maryland Governor Martin O'Malley, the National Governor's Association, the Gates Foundation, the Lumina Foundation and other leaders have clearly articulated the need for America to produce more well educated citizens, especially in areas of science and technology, if our country does not want to lose its leadership in the world economy.

In addition, recent advances in technology—impacting both online learning **and** classroom instruction—have demonstrated that active and interactive learning improves the ability of students to learn and understand material in ways that will make integration of information much more effective.

And advances in cognitive science are enlightening educators on better ways to teach even as we understand more about how people learn. We must adapt an academy built on tradition to better teach today's diverse population, and we must gain flexibility to include

the "non-traditional" student that is now the most common in our institutions. Our institutions must also be aware of—and open to—changes required to accommodate the needs of our workforce as well as better understanding what and how students *expect* to learn.

As we navigate this new landscape, higher education is facing two quite sobering facts. First, the path to a secure economic future is based on attaining a higher education credential. Second, too many of our economically disadvantaged citizens are not attaining those credentials. A child born in the highest quartile of income has about an 85% chance of earning a college degree, while a child born into the lowest quartile of income has less than an 8% chance of earning a degree. To provide the opportunity needed to succeed, we must focus effort to change this trend for children from the lowest income brackets. The probability that such a child will climb the educational ladder is lower in the United States than in almost every other developed country. This cannot continue if we are to succeed in the highly competitive global market.

USM was one of the original grantees in Lumina Foundation's "Making Opportunity Affordable" initiative. USM built a partnership with the entire Maryland higher education community, including the Maryland Higher Education Commission (MHEC), the Maryland Association of Community Colleges (MACC), and the Maryland Independent College and University Association (MICUA) to think strategically about reducing the costs of higher education across the board while maintaining quality and increasing access. USM was recognized for developing best practices by the Lumina Foundation in the key area of creating new models: "lower-cost, high-quality approaches substituted for traditional academic delivery wherever possible to increase capacity for serving students."[1]

With support from both the Lumina Foundation and Complete College America, USM is providing leadership to the state in redesigning "bottleneck" undergraduate courses (e.g., general education and developmental courses in which a large majority of students fail to earn a C or better) at two-year and four-year institutions across the state to improve student learning and to reduce the average cost per course. We can then reinvest cost savings to support additional redesign projects and other student completion-related priorities. Since so called "gatekeeper" courses (general education courses, developmental courses, and entry level courses – i.e., mathematics and sciences courses for a specific major) pose significant problems for many college students and halt their degree progression, we have focused on bringing course redesign efforts in these areas to scale statewide.

Redesign efforts enhance and transform these gatekeeper courses by systematically incorporating individualized, active-learning approaches through technology-based exercises, and providing students with ongoing feedback to assess their progress. USM's previous experience with course redesign has shown that such efforts help to address persistent academic problems such as inconsistent preparation among incoming college students; poor student retention of material; low student engagement in lecture-based courses; and lack of coordination among faculty members across multiple course sections, leading to "course drift" and inconsistent student learning

[1] Lumina, "Four Steps to Finishing First."

Thus far, we have supported the redesign of almost 70 courses across the state, including enrollment of 12,000 students. Preliminary, early results indicate an effective and efficient approach. Initial evidence indicates no higher cost of delivery, decreases in cost in some courses, and an increase in student success. We are launching a major longitudinal study to more broadly assess impact and value.

Course redesign was our first large-scale implementation of academic transformation principles, and our success in this work has led us to explore additional innovative practices and models. The USM is also working with Ithaka S+R, on a $1.4 million grant funded by the Gates Foundation, to investigate possible ways that some Massive Open Online Courses (MOOCs) provided by Coursera and the Open Learning Initiative might be incorporated into our existing university courses that are part of designed curricula leading to degrees at our institutions. While stand-alone MOOCs are becoming increasingly prevalent, the audience is the global general public and the manner in which credit might be given still remains to be studied. Our challenge is determining whether or not MOOCs, or portions of them, can be used to enhance the learning from a credit-bearing course in a degree path and help to make higher education degrees more attainable.

To further advance our efforts, the USM has created a new Center for Innovation and Excellence in Learning and Teaching (CIELT) that will bring together faculty and administrative leaders from across our 12 institutions to determine ways to improve the learning of students. We will assess trends and design projects to compare new ways to deliver courses with our current processes. By analyzing results and carefully collecting qualitative data on the process, challenges and resources required, we will be able to assess costs and determine ways to make the learning process more efficient and cost effective for the students, while using the knowledge, skills and talents of our faculty to their fullest. As a result of careful documentation of successes and problems, we will be developing information about best practices in our institutions.

The focus on this work, combined with support from the state and leadership from the USM and our institutions, is creating a culture of innovation involving the USM, community colleges, and private and independent colleges and universities in Maryland. The work performed by the USM institutions thus far led to the state providing $13 million in enhancement funds. A major portion of that funding is going to additional investments in course redesign activities and the enhancement of academic innovation on the campuses.

For decades, college instruction has been subject to the pressures of the “Baumol Cost Disease”, as teaching a 3-credit course has taken the same amount of time in human resources through time. Now, we have the insight and new instructional technologies that create the real possibility of increasing learning productivity. But as soon as we use the term "learning productivity," many who don't truly understand how people learn jump to models that work to enhance productivity in other sectors. Unfortunately, these cost/benefits models for "productivity" don't work in the education context. For example, simply broadcasting information to more people at less cost does not result in learning *per se*; if it did the Internet would have fixed everything!

So, the real scalability opportunities in higher education will not rest simply with advances such as MOOCs, but rather with new technologies that enhance learner *transactions* with each other and the material under study and facilitate both the assessment of learning and adapt according to students' needs. Those technological advances are the ones that are more directly tied to advances in brain science, not MOOCs… and they suggest a positive future for improving learning transactions that will increasingly make us "productive together" as members of broad learning communities.

We envision environments in which learners have equitable access to truly differentiated instruction that provides them with myriad ways to acquire content, construct knowledge, and represent their understandings of the larger *instructional conversation*. These learning environments will be inclusive both in terms of providing equitable access as well as in terms of proactively making all learners feel like they belong as important contributors to the discussion (there is a significant affective component here that has been recently emerging from the brain science as well). Learners will be engaged in collaborative, project-oriented tasks that will expose them to multiple perspectives and ways of thinking. Our definition of "learning success" will shift away from our current paradigm to one that seeks to maximize students' learning and help them achieve everything for which they are capable. Education will become an intrinsically motivating, self-actualizing experience for all learners, not just "the honors students."

As this field of academic innovation is moving extremely rapidly, we must have some patience to permit the design of comparative studies and analysis of data that will demonstrate the best practices that will make significant differences in student success and improvement in efficiency and cost reduction.

State leaders in Maryland are committed to making college accessible and affordable, and providing every opportunity for students to succeed. Governor Martin O'Malley has clearly stated his goal that 55% of the adult Maryland population have a postsecondary degree by the year 2025. While we in Maryland have one of the highest proportions of adults with postsecondary degrees, we have much work ahead of us! This year, the Maryland legislature passed a comprehensive College Readiness and Completion Act that includes requirements for math in high school, high school and college dual enrollment strategies, and transfer capabilities among our community colleges and 4-year public institutions. The statute also requires that 30 hours of general education credit and 60 hours of credit from community colleges be accepted by the 4-year institutions. Also required are degree plans and the development of clear pathways for 2- and 4-year degrees, as well as a limit on the number of credits required for a bachelor's degree. All of these actions help focus the educational pathway, permitting students to earn a degree more efficiently.

The quality and efficiency of higher education is a priority for our Board of Regents. We are especially focused on enhancing that efficiency, including the careful design and implementation of remedial courses and improvement of success in introductory credit-bearing courses, especially in math where many of our students have challenges. By reducing the rates at which students drop, fail, or withdraw from these first basic courses and ensuring fuller understanding of the concepts and therefore higher success in

subsequent courses, we can reduce the time to degree significantly. In fact, over the last four years our time to degree has decreased from 4.8 years to record low of 4.3 years.

As you may have heard, the USM's Effectiveness and Efficiency (E&E) Initiative—the systematic reengineering of our administrative AND academic functions to reduce costs while enhancing quality—has received significant national attention and praise. Administratively, we have removed more than $350 million in direct costs and saved millions more in cost avoidance. Academically, USM enrollment, community college transfers, and degrees awarded are all at record levels, while time-to-degree is near an all-time low. This focus on the academic side of E&E includes the careful design and implementation of remedial courses and enhancement of success in first credit-bearing courses, especially in math where many of our students have challenges. We believe these efforts are a part of our ability to keep costs lower for our students. We have also been able to control tuition rates. Since 2008, our tuition has risen only 2% for full-time, in-state students compared to a national average of 27%.

Along with our E&E efforts, the USM is focused on the way we distribute financial aid. Several years ago, our Chancellor appointed a commission to study financial aid and found that we were disproportionately using our available aid on merit rather than need-based cases. As a result of the study, the Board passed a policy stipulating that low-income students, defined as Pell eligible, should incur debt at a rate at least 25% less than the average student debt. We reached that goal in 2012, and are pleased that we continue to focus on providing access and affordability to the students who are most challenged financially, many of whom are first-generation college students.

In the higher education sector, we take our responsibility of "keeping college within reach" very seriously, and we will continue to pursue a variety of innovations that will enhance student success. We need to remain firm in our convictions of access, inclusion, and quality. Those of us in leadership positions in higher education much show both courage and adaptability to attain these goals. Across the nation we ALL must dedicate ourselves to improved student outcomes and greater educational success to keep America's leadership position economically.

Thank you.